

Makita

アメリカ

Jig Saw

MODEL 4320

INSTRUCTION MANUAL



 **DOUBLE
INSULATION**

SPECIFICATIONS

Length of stroke	Max. cutting capacities		Strokes per minute	Overall length	Net weight
	Wood	Steel			
18 mm (11/16")	50 mm (2")	6 mm (1/4")	0 - 3,200	174 mm (6-7/8")	1.3 kg (2.9 lbs)

* Manufacturer reserves the right to change specifications without notice.

* Note: Specifications may differ from country to country.

IMPORTANT SAFETY INSTRUCTIONS

(For All Tools)

WARNING: WHEN USING ELECTRIC TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, AND PERSONAL INJURY, INCLUDING THE FOLLOWING:

READ ALL INSTRUCTIONS.

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **CONSIDER WORK AREA ENVIRONMENT.** Don't use power tools in damp or wet locations. Keep work area well lit. Don't expose power tools to rain. Don't use tool in presence of flammable liquids or gases.
3. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Don't let visitors contact tool or extension cord.
4. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place — out of reach of children.
5. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
6. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended; for example, don't use circular saw for cutting tree limbs or logs.
7. **DRESS PROPERLY.** Don't wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
8. **USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty.
9. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
10. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
11. **DON'T OVERREACH.** Keep proper footing and balance at all times.
12. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
13. **DISCONNECT TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.

14. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
15. **AVOID UNINTENTIONAL STARTING.** Don't carry tool with finger on switch. Be sure switch is OFF when plugging in.
16. **EXTENSION CORDS.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

TABLE 1 MINIMUM GAGE FOR CORD SETS

			Total Length of Cord in Feet			
			0 – 25	26 – 50	51 – 100	101 – 150
Ampere Rating More Than	Not More Than		A W G			
0	—	6	18	16	16	14
6	—	10	18	16	14	12
10	—	12	16	16	14	12
12	—	16	14	12	Not Recommended	

17. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
18. **STAY ALERT.** Watch what you are doing, use common sense. Don't operate tool when you are tired.
19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Don't use tool if switch does not turn it on and off.
20. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example; pipes, radiators, ranges, refrigerator enclosures.
21. **REPLACEMENT PARTS.** When servicing, use only identical replacement parts.
22. **POLARIZED PLUGS.** To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

VOLTAGE WARNING: Before connecting the tool to a power source (receptacle, outlet, etc.) be sure the voltage supplied is the same as that specified on the nameplate of the tool. A power source with voltage greater than that specified for the tool can result in **SERIOUS INJURY** to the user — as well as damage to the tool. If in doubt, **DO NOT PLUG IN THE TOOL**. Using a power source with voltage less than the nameplate rating is harmful to the motor.

ADDITIONAL SAFETY RULES

1. Avoid cutting nails. Inspect for and remove all nails from the workpiece before operation.
2. Don't cut hollow pipe.
3. Do not cut oversize workpiece.
4. Check for the proper clearance beneath the workpiece before cutting so that the blade will not strike the floor, workbench, etc.
5. Hold the tool firmly.
6. Make sure the blade is not contacting the workpiece before the switch is turned on.
7. Keep hands away from moving parts.
8. When cutting through walls, floors or wherever "live" electrical wires may be encountered, **DO NOT TOUCH ANY METAL PARTS OF THE TOOL!** Hold the tool only by the insulated grasping surfaces to prevent electric shock if you cut through a "live" wire.
9. Do not leave the tool running. Operate the tool only when hand-held.
10. Always switch off and wait for the blade to come to a complete stop before removing the blade from the workpiece.
11. Do not touch the blade or the workpiece immediately after operation; they may be extremely hot and could burn your skin.

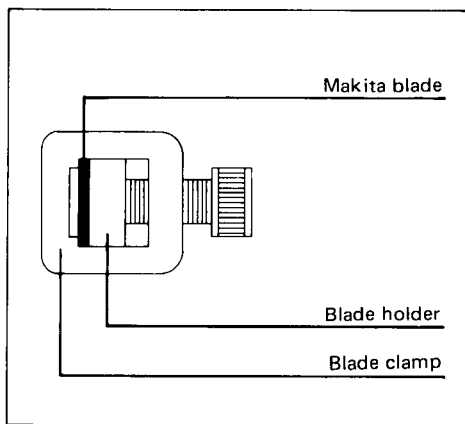
SAVE THESE INSTRUCTIONS.

Installing or removing saw blade

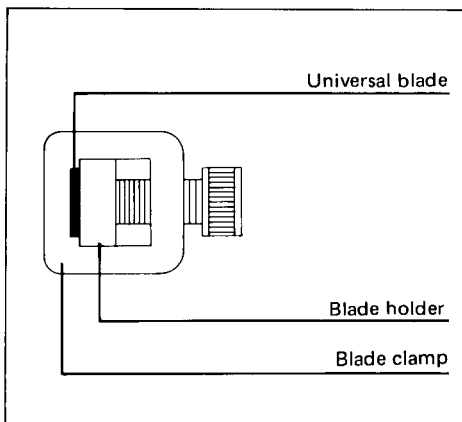
CAUTION:

Always be sure that the tool is switched off and unplugged before installing or removing the blade.

The blade installing position varies depending upon the type of blade being used. Install the blade in the proper position as shown in the figures below.

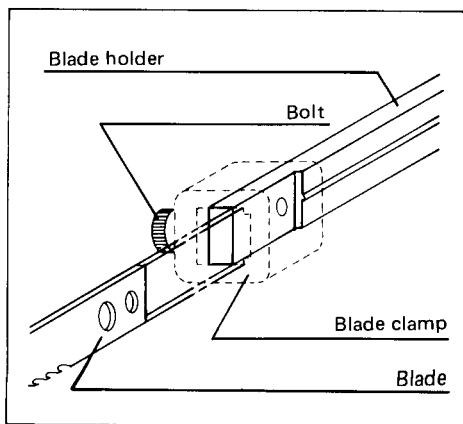


Installing position for Makita blades

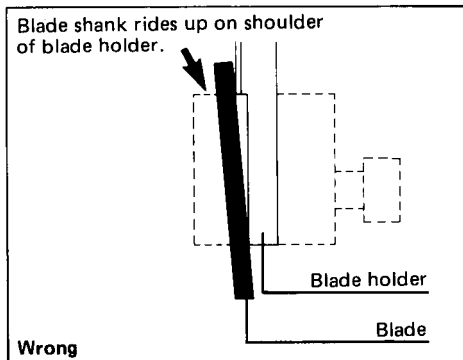
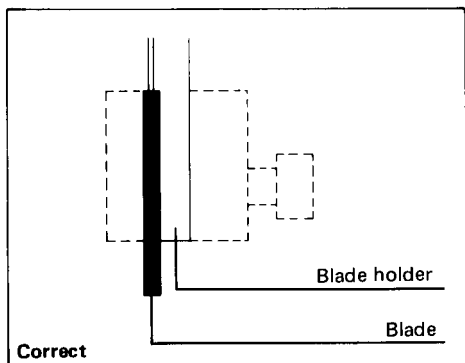


Installing position for universal blades

To install the blade, loosen the bolt with the hex wrench. With the blade teeth facing forward, insert the blade between the blade clamp and the blade holder as far as it will go.



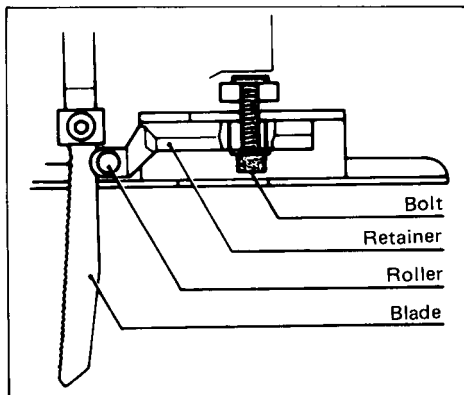
Keep the blade shank flush with the installing position so that it does not ride up on the shoulder of the blade holder. Tighten the bolt securely with the hex wrench.



To remove the blade, follow the installation procedures in reverse.

Using roller

With the hex wrench, loosen the bolt which holds the base and retainer. Slide the retainer so that the roller contacts the blade, then tighten the bolt. However, when using a blade that does not have a straight back (e.g., Nos. 6, 7), slide the retainer back so that the roller will not contact the blade.

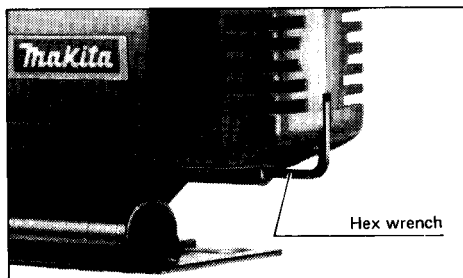


CAUTION:

Use a lubricant or cutting oil between the blade and roller when cutting iron or composition board, etc. Failure to do so will shorten the service life of your blade and roller.

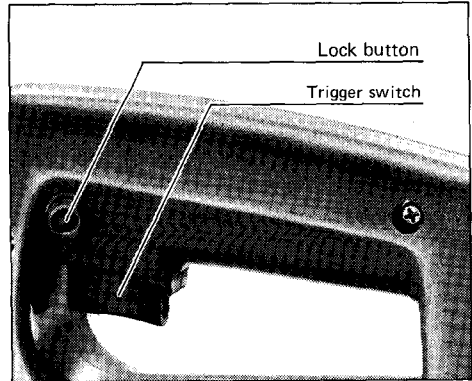
Hex wrench storage

When not in use, the hex wrench can be conveniently stored.



Switch action

Tool speed is increased by increasing pressure on the trigger. To start the tool, simply pull the trigger. Release the trigger to stop. For continuous operation, pull the trigger and then push in the lock button. To stop the tool from the locked position, pull the trigger fully, then release it.

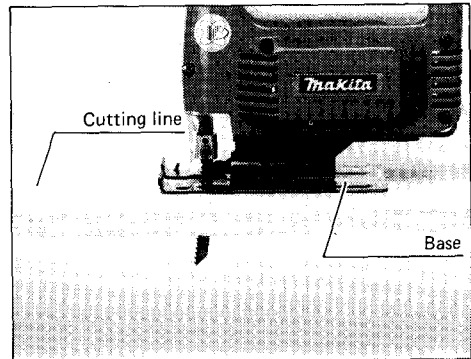


CAUTION:

Before plugging in the tool, always check to see that the trigger switch actuates properly and returns to the "OFF" position when released.

Operation

Turn the tool on and wait until the blade attains full speed. Then rest the base flat on the workpiece and gently move the tool forward along the previously marked cutting line. When cutting curves, advance the tool very slowly.

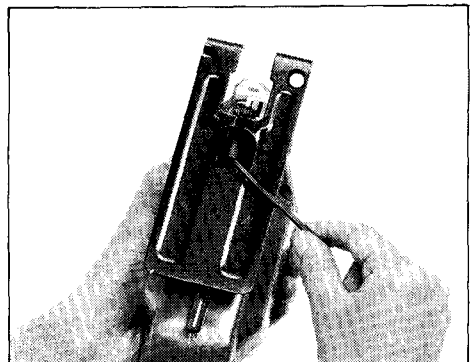


CAUTION:

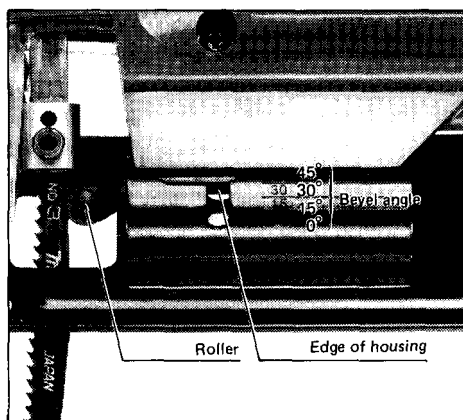
Failure to hold the tool base flush with the workpiece may cause blade breakage.

Bevel cutting

With the base tilted, you can make bevel cuts at any angle between 0° and 45° (left or right).

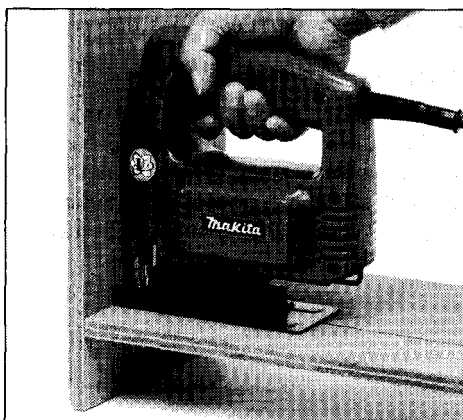


Loosen the bolt on the back of the base with the hex wrench and slide the base slightly backwards. Tilt the base to the desired angle. The edge of the housing indicates the bevel angle. Then check the contact between the back edge of the blade and the roller. Now tighten the bolt securely on the back of the base.



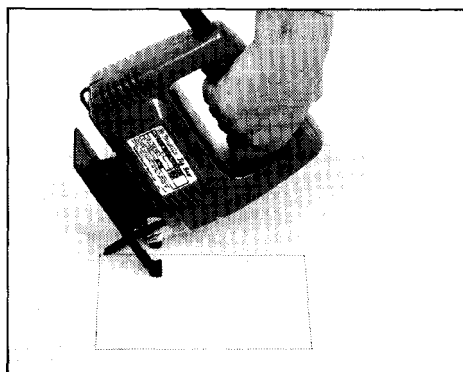
Front flush cuts

Loosen the bolt on the back of the base with the hex wrench, then slide the base backwards. Check the contact between the back edge of the blade and the roller, then secure the bolt.



Plunge cutting

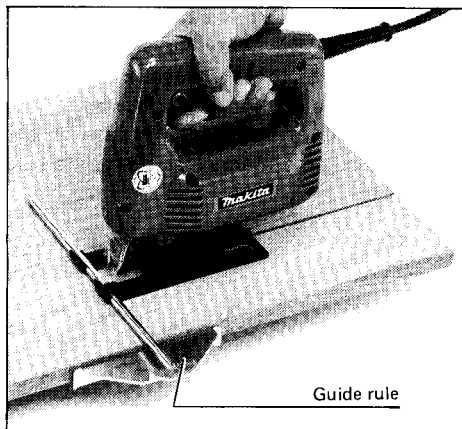
Starting a cut at other than the edge of the workpiece without first drilling a starting hole requires a "plunge cut". This can be accomplished by tipping the tool forward until the front end of the base rests against the workpiece. Switch the tool on and lower the back end of the tool slowly, gradually allowing the blade to saw through the workpiece until the base is able to sit flat on the workpiece. You may then proceed forward with the cut in a normal manner.



If using a drill for a starting hole, bore a hole over 12 mm (1/2") in diameter. Then insert the blade in it and proceed.

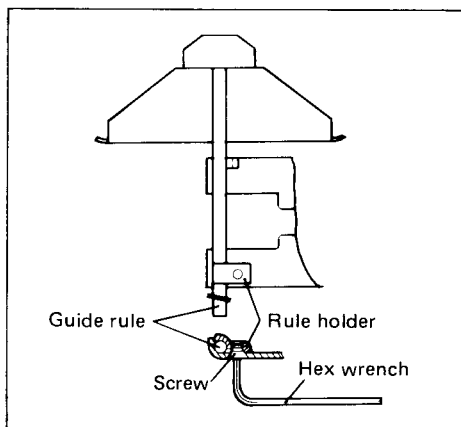
Using guide rule (Rip fence)

When cutting widths of under 150mm (6'') repeatedly, use of the guide rule will assure fast, clean, straight cuts.



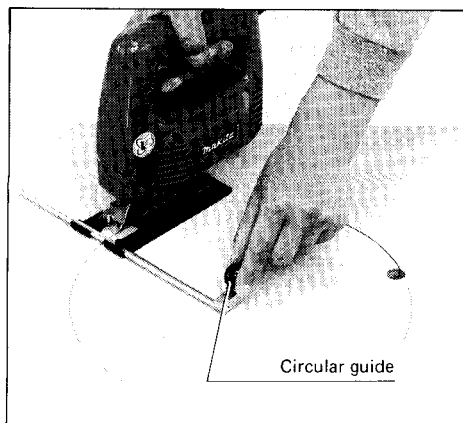
To attach the guide rule (rip fence), secure the rule holder to the base with the screw (do not tighten).

Insert the guide rule between the base and the rule holder. Now tighten the screw with the hex wrench.

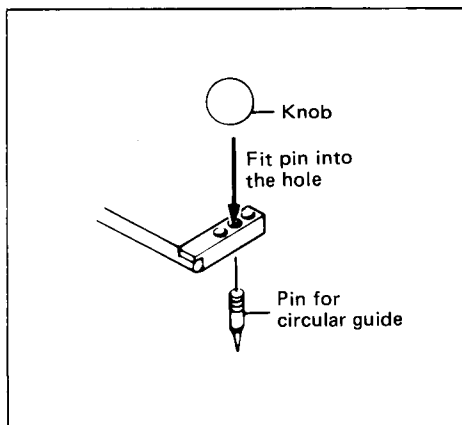


Using circular guide

Use of the circular guide insures clean, smooth cutting of circles (radius, under 200 mm; 7-7/8'') and arcs.



To attach the circular guide, use the pin, inserting it in the center hole (arrow) and secure it with the threaded knob. Then slide the base of the tool forwards. The circular guide attaches to the base of the tool in the same manner as the guide rule (rip fence).

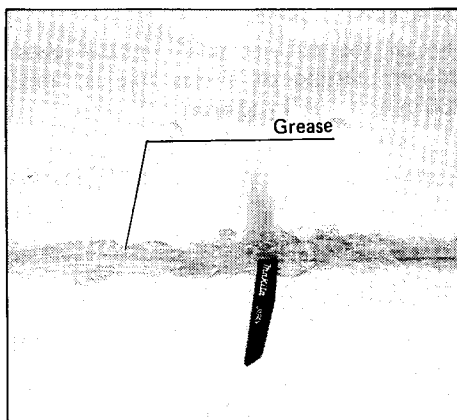


Metal cutting

Always use a suitable coolant (cutting oil) when cutting metal. Failure to do so will cause significant blade wear.



The underside of the workpiece can be greased instead of using a coolant.



MAINTENANCE

CAUTION:

Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

To maintain product **SAFETY** and **RELIABILITY**, repairs, carbon brush inspection and replacement, any other maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

ACCESSORIES

CAUTION:

These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. The accessories or attachments should be used only in the proper and intended manner.

An exception: Universal shank jig saw blades with a thickness of 1 mm – 1.25 mm (1/32" – 3/64") and a length of 58 mm – 82 mm (2-9/32" – 3-7/32").

● Guide rule (Rip fence)

Part No. 164113-2



● Circular guide assembly

Part No. 123030-5



● Rule holder

Part No. 343381-2



● Hex wrench

Part No. 783201-2



● Jig saw blade



◆ Packed 10 each

◆◆ Packed 5 each

Blade type	Part No.	Teeth per inch	Effective cutting length
No. 1	◆ 792145-5	24	60 mm (2-3/8")
	◆◆ 792144-7		
No. 2	◆ 792136-6	14	60 mm (2-3/8")
	◆◆ 792135-8		
No. 3	◆ 792139-0	9	60 mm (2-3/8")
	◆◆ 792138-2		
No. 4	◆ 792142-1	9	60 mm (2-3/8")
	◆◆ 792141-3		
No. 5	◆ 792133-2	24	42 mm (1-5/8")
	◆◆ 792132-4		
No. 6	◆ 792152-8	9	60 mm (2-3/8")
	◆◆ 792151-0		
No. 7	◆ 792272-8	14	60 mm (2-3/8")
	◆◆ 792268-9		

Blade type	Part No.	Teeth per inch	Effective cutting length
No. 8	◆ 792273-6	8	60 mm (2-3/8")
	◆◆ 792269-7		
No. 9	◆ 792327-9	8	60 mm (2-3/8")
	◆◆ 792288-3		
No. 10	◆ 792328-7	9	60 mm (2-3/8")
	◆◆ 792320-3		
No. 16	◆ 792211-8	9	60 mm (2-3/8")
	◆◆ 792207-9		
No. 17	◆ 792214-2	14	60 mm (2-3/8")
	◆◆ 792208-7		
No. 41	◆◆ 792396-0	12	60 mm (2-3/8")
No. 42	◆◆ 792395-2	15	60 mm (2-3/8")

(Note)

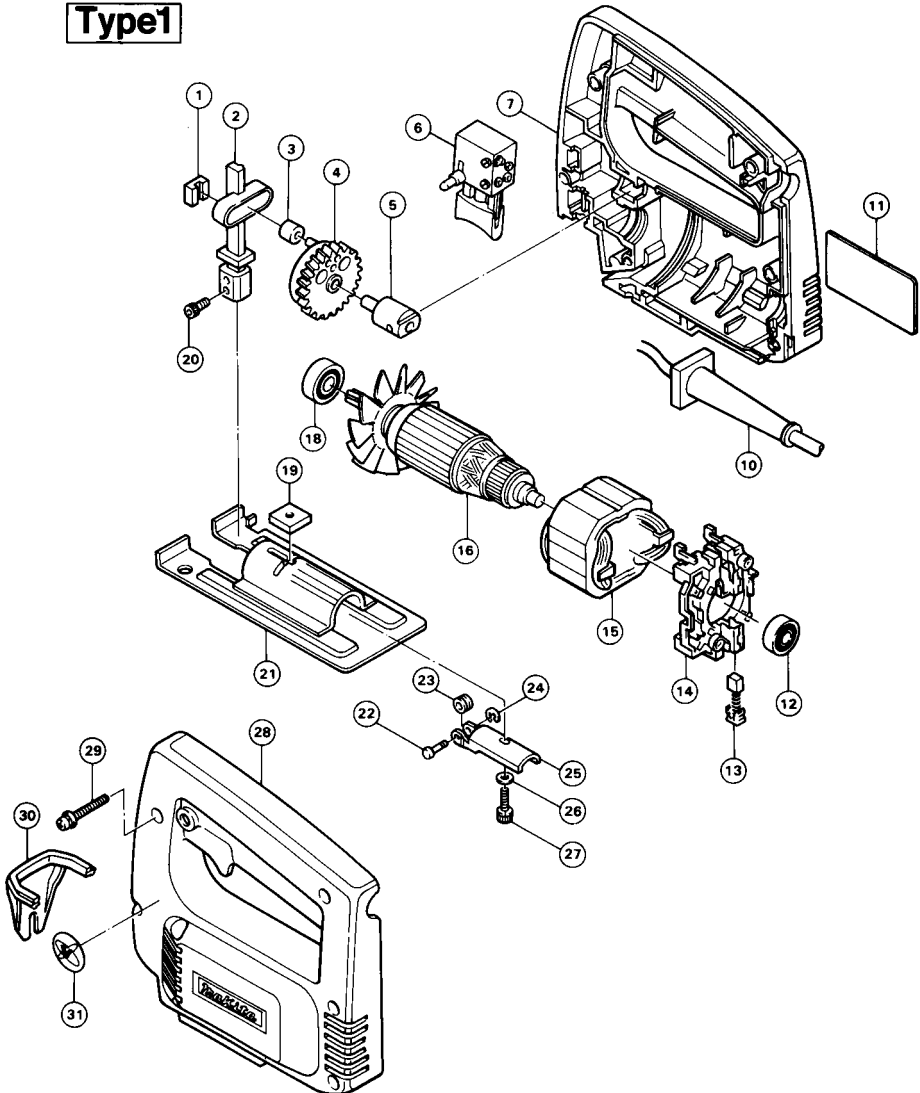
Refer to the next page for "Application" of each blade.

Blade type	Applications				Feature
	Wood and plywood	Plastics	Aluminum	Mild steel	
No. 1	—	1.5 – 6 mm thick (1/16" – 1/4")	1 – 6 mm thick (3/64" – 1/4")	1 – 3 mm thick (3/64" – 1/8")	Also ideal for stainless steel. For corrugated plastics and tough plastics.
No. 2	3 – 55 mm thick (1/8" – 2-1/8")	3 – 55 mm thick (1/8" – 2-1/8")	2 – 10 mm thick (5/64" – 3/8")	2 – 6 mm thick (5/64" – 1/4")	For decorative veneers.
No. 3	3 – 55 mm thick (1/8" – 2-1/8")	3 – 55 mm thick (1/8" – 2-1/8")	—	—	For ordinary cutting.
No. 4	3 – 55 mm thick (1/8" – 2-1/8")	3 – 55 mm thick (1/8" – 2-1/8")	3 – 30 mm thick (1/8" – 1-1/8")	3 – 6 mm thick (1/8" – 1/4")	For hardwoods, thick mild steel plate and tough plastics.
No. 5	—	1.5 – 6 mm thick (1/16" – 1/4")	1 – 6 mm thick (3/64" – 1/4")	1 – 3 mm thick (3/64" – 1/8")	Also ideal for stainless steel. For tough plastics.
No. 6	3 – 55 mm thick (1/8" – 2-1/8")	3 – 55 mm thick (1/8" – 2-1/8")	—	—	Ideal for scroll cutting.
No. 7	2 – 55 mm thick (5/64" – 2-1/8")	2 – 55 mm thick (5/64" – 2-1/8")	2 – 10 mm thick (5/64" – 3/8")	2 – 6 mm thick (5/64" – 1/4")	Ideal for scroll cutting. For tough plastics.
No. 8	4 – 55 mm thick (5/32" – 2-1/8")	4 – 55 mm thick (5/32" – 2-1/8")	—	—	For fast cutting.
No. 9	4 – 55 mm thick (5/32" – 2-1/8")	4 – 55 mm thick (5/32" – 2-1/8")	—	—	For fast finish work.
No. 10	4 – 55 mm thick (5/32" – 2-1/8")	4 – 55 mm thick (5/32" – 2-1/8")	—	—	For fast finish work, especially in plywood.
No. 16	3 – 55 mm thick (1/8" – 2-1/8")	3 – 55 mm thick (1/8" – 2-1/8")	—	—	Ideal for scroll cutting.
No. 17	2 – 55 mm thick (5/64" – 2-1/8")	2 – 55 mm thick (5/64" – 2-1/8")	2 – 10 mm thick (5/64" – 3/8")	2 – 6 mm thick (5/64" – 1/4")	Ideal for scroll cutting.
No. 41	3 – 50 mm thick (1/8" – 2")	3 – 50 mm thick (1/8" – 2")	—	—	For tough plastics and decorative veneer finishing.
No. 42	2 – 50 mm thick (5/64" – 2")	2 – 50 mm thick (5/64" – 2")	—	—	For decorative veneers.

Note: Application columns indicate thickness of materials which may be cut.
However, remember to stay within the capacity of the tool itself.

JIG SAW Model 4320

Type1



Note: The switch and other part configurations may differ from country to country.

ITEM NO.	NO. USED	DESCRIPTION	ITEM NO.	NO. USED	DESCRIPTION
<u>MACHINE</u>			<u>MACHINE</u>		
1	3	Plane Bearing 4	18	1	Ball Bearing 608LLB
2	1	Slider	19	1	Holder
3	1	Sleeve 4	20	1	Hex. Socket Head Bolt M4x8
4	1	Gear	21	1	Base
5	1	Pin 6	22	1	Pin 3
6	1	Switch	23	1	Roller
7	1	Housing Set (With Item 28)	24	1	Stop Ring E-2.3
10	1	Cord	25	1	Retainer
11	1	Name Plate	26	1	Flat Washer 4
12	1	Ball Bearing 607LLB	27	1	Hex. Socket Head Bolt M4x14 (With Washer)
13	2	Carbon Brush	28	1	Housing Set (With Item 7)
14	1	Terminal Base Complete 55C	29	7	Pan Head Screw M4x25 (With Washer)
15	1	Field	30	1	Protector
16	1	ARMATURE ASSEMBLY (With Item 12 & 15 - 18)	31	1	Label

Note: The switch and other part specifications may differ from country to country.

MAKITA LIMITED ONE YEAR WARRANTY

Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one-year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others;
- repairs are required because of normal wear and tear;
- The tool has been abused, misused or improperly maintained;
- alterations have been made to the tool.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE-YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

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